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		Perihelion Passage, 1873, May 5·0.				Perihelion Passage, May 9·0.	
0h G.M.T.		R.A.	N.P.D.	Log. Δ	I.	R.A.	N.P.D.
		h m s	° ′			h m s	° ′
March	22	16 24 19	102 30·1	0·0567	0·24	16 13 9	101 23·9
	23	25 42	35·3			14 25	28·7
	24	27 3	40·6	0·0494	0·25	15 39	33·6
	25	28 23	45·8			16 52	38·5
	26	29 42	51·1	0·0420	0·26	18 3	43·4
	27	30 59	102 56·4			19 13	48·3
	28	32 15	103 1·8	0·0347	0·27	20 21	53·3
	29	33 29	7·1			21 28	101 58·3
	30	34 41	12·5	0·0273	0·28	22 33	102 3·4
	31	35 52	17·9			23 36	8·5
April	1	37 1	23·3	0·0200	0·29	24 38	13·6
	2	38 8	28·7			25 38	18·8
	3	39 14	34·2	0·0107	0·30	26 37	24·0
	4	40 18	39·7			27 34	29·2
	5	41 20	45·3	0·0055	0·31	28 28	34·5
	6	42 21	50·9			29 20	39·8
	7	16 43 20	103 56·5	9·9984	0·32	16 30 11	102 45·2

Tempel's Comet of Short Period.

Letter from Dr. Bruhns, Director of the Observatory, at Leipsic, to Mr. Hind, dated 1873, *March* 17.

A pupil of mine, Dr. Seeliger, to facilitate the discovery of the periodical Comet of Tempel, 1867 II, has calculated the perturbations by *Jupiter*. He has started from Mr. Sandberg's elements, and finds,—

		Elements 1867.			Elements 1873.	
T		1867, May, 23·958 Berlin.			1873, May, 8·95 Berlin.	
		° ′ ″			° ′ ″	
π − ☊	..	134 59 14	M. Eq. 1867·0	..	160 7 24	M. Eq. 1873·0.
☊	..	101 10 10		..	77 58 7	
i	..	6 24 35		..	9 54 11	
ϕ	..	30 38 39		..	28 35 4	
μ	..	623″·044		..	591″·889	

The time of perihelion in 1873 is retarded fully 117 days by the perturbations. These perturbations are thus large because the comet has approached so near to *Jupiter* : the distances were,—

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1867, May 4	..	5·15	1870, Jan. 28	..	0·32
Nov. 20	..	2·93	Aug. 16	..	0·82
1868, June 7	..	1·69	1871, Mar. 4	..	1·29
Dec. 24	..	1·08	Sept. 20	..	1·73
1869, July 12	..	0·65	1872, Apr. 7	..	1·94
			Oct. 24	..	2·65

To have an idea of the comet's intensity of light, it may be noted that on 1867, April 12, log. $r = 0·2080$, log. $\Delta = 9·8173$, and at the last observation, August 21, log. $r = 0·2504$, log. $\Delta = 0·0863$.

Ephemeris of Tempel's Comet (1867 II.)

For 12^h Berlin Mean Time.

1873.		R.A. h	m	s	Decl. °	′	Log. Δ	Log. r.
Mar.	23	16	16	25	− 9	36·7	0·0252	0·2483
	25		18	57		45·5		
	27		21	25		54·5		
	29		23	46	−10	3·6		
	31		26	0		12·8		
Apr.	2		28	8		22·2	9·9870	0·2436
	4		30	9		31·8		
	6		32	4		41·7		
	8		33	50		51·9		
	10		35	28	−11	2·5		
	12		36	59		13·5	9·9503	0·2400
	14		38	23		24·9		
	16		39	39		36·7		
	18		40	46		49·1		
	20		41	44	−12	2·0		
	22		42	33		15·5	9·9168	0·2374
	24		43	14		29·4		
	26		43	47		43·9		
	28		44	11		59·2		
	30		44	25	−13	15·2		
May	2		44	31		32·1	9·8883	0·2360
	4		44	30		49·4		
	6		44	21	−14	7·3		
	8		44	3		26·0		
	10		43	47		45·4		
	12		43	4	−15	5·4	9·8674	0·2359
	14		42	25		26·1		
	16		41	41		47·4		

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1873.	R.A. h m s	Decl. ° ′	Log. Δ	Log. *r*.
May 18	16 40 51	−16 9·1		
20	39 55	31·1		
22	38 55	53·5	9·8567	0·2369
24	37 45	−17 16·4		
26	36 37	39·5		
28	35 29	−18 3·0		
30	34 21	26·8		
June 1	16 33 12	−18 50·8	9·8576	0·2391

For a variation of ± 10 days in time of perihelion passage, the places are:—

	T − 10 Days. h m	° ′		T + 10 Days. h m	° ′
Mar. 23	16 45·2	−12 31	..	15 47·1	− 6 15
Apr. 22	17 21·7	−15 30	..	16 1·0	− 8 14
May 22	17 28·3	−20 18	..	15 49·3	−12 31

Note by Mr. Hind.

Using the log. distances in the above ephemeris, the intensity of light, as represented by $\frac{1}{r^2 \Delta^2}$, will be,—

Mar. 23	..	0·29	May 2	..	0·56
Apr. 2	..	0·35	12	..	0·62
12	..	0·42	22	..	0·65
22	..	0·49	June 1	..	0·64

For comparison with these numbers we have,—

1867, Apr. 3	I = 0·75	Discovered by Tempel. "Faint and diffused."
21	1·06	Easily observed at Leipsic in moonlight.
May 6	1·23	Very bright; nucleus = * 9·7 magnitude (Leipsic.)
29	1·18	Pretty bright; nucleus = * 11·5 ,,
June 22	0·85	Very well seen; nucleus = * 12 ,,
July 7	0·63	Up to this date well seen by Dr. Peters (Clinton, U.S.) "A star-like nucleus admitted of very accurate pointing."
Aug. 21	0·21	Last observed by Schmidt at Athens: 2′ diameter, extremely faint. Glimpsed till August 27.

These values of I are calculated from Mr. Searle's elements. It appears almost certain that large telescopes will be required for the proper observation of the comet at this appearance.